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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

RAMAKRISHNAIAH, M	
ART UNIT	PAPER NUMBER

2643

DATE MAILED:

03/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/163,396

Applicant(s)
Terry Si Cheng et al.

Examiner
Melur Ramakrishnaiah

Group Art Unit
2643



☒ Responsive to communication(s) filed on Dec 21, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-26 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-26 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 5-9, 10-15, 16-19, 20-23, 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtake (US PAT. 5,487,180) in view of Shen et al. (US PAT: 6,118,767, filed 11-10-1997, hereinafter Shen.)

Regarding claims 1, 5, 10, 16, 20, 24, Ohtake discloses method of determining initial transmission power comprising: a transmitter in A (fig. 12A) that wirelessly transmits control signal (pilot signal) and paging message to a mobile station of the mobile communication system, a controller in A that determines optimum talk channel power in accordance with control signal (pilot signal) strength of the pilot signal wirelessly received by the mobile station, the transmitter wirelessly transmitting message in a talk channel at the optimum talk channel power (fig. 12A, col. 4 lines 24-48, col. 9 lines 54-67), wirelessly transmitting a control signal (pilot signal) to a mobile station 'a' (fig. 12A) of a mobile communication system, determining optimum down talk channel power in accordance with pilot signal strength of the pilot signal wirelessly received by the mobile station 'a', and wirelessly transmitting message in a talk channel to the mobile station 'a' over a talk channel at optimum talk channel power; a talk channel determination source code

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segment (inherent) for causing a computer of a mobile switching center associated with base station A (fig. 12A) of the mobile communication system to determine optimum talk channel power in accordance with pilot signal strength of the pilot signal wirelessly received by the mobile station 'a' (fig. 12A) of the mobile communication system, and talk channel transmission source code segment (inherent) for the computer to direct the base station 'A' (FIG. 12A) to wirelessly transmit message in talk channel to the mobile station 'a' over a talk channel at the optimum talk channel power (fig. 12A, col. 4 lines 24-64).

Ohtake differs from the claimed invention by not explicitly showing transmission of page at the optimum paging channel power.

However, Shen discloses interference control for CDMA which teaches need for intelligent power control for reducing interference in order to provide a reasonable capacity in the mobile system (col. 1 lines 54-63).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohtake's system to provide for transmission of page at the optimum paging channel power as this would provide the benefits of using minimum possible power for signaling between the base station and mobile station, thus contributing to the reduction in interference power in the system and all so maintain a reasonable capacity in the mobile system as taught by Shen.

Regarding claims 2-3, 6-8, 11-14, 17-18, 21-22, 25-26, Ohtake further shows the following: the controller in 'A' (fig. 12A) determines optimum talk channel power in accordance

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with the control signal (pilot signal) strength and threshold value (forward loading of the base station), the forward loading of the base station being a ratio of current transmitted power of the base station to maximum power of the base station, controller in 'A' (fig. 12A) also determines an optimum talk channel (traffic channel) power in accordance with the pilot signal strength, traffic channel determination source code segment (inherent) for causing the computer in 'A' to determine optimum talk channel (traffic channel) power in accordance with the pilot signal strength, transmission channel source code segment (inherent) for causing the computer to wirelessly transmit a call to the mobile station 'a' (fig. 12A) over a traffic channel at the optimum traffic channel power (fig. 12A, col. 4 lines 24-64).

Ohtake differs from the claimed invention by not explicitly showing transmission of page at the optimum paging channel power.

However, Shen discloses interference control for CDMA which teaches need for intelligent power control for reducing interference in order to provide a reasonable capacity in the mobile system (col. 1 lines 54-63).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohtake's system to provide for transmission of page at the optimum paging channel power as this would provide the benefits of using minimum possible power for signaling between the base station and mobile station, thus contributing to the reduction in interference power in the system and all so maintain a reasonable capacity in the mobile system as taught by Shen.

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Regarding claims 4, 9, 15, 19, 23, Ohtake does not show CDMA mobile communication system.

However, Shen discloses Interference control for CDMA networks which teaches use of CDMA system and use of same frequency band by all users, each user being assigned a different code for access to the cellular system, which implies a greater system capacity (col. 1 lines 34-63)

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Ohtake's system to be used in a CDMA communication system as CDMA system would provide for greater utilization of wireless communication system capacity as taught by Shen.

Response to Arguments

3. Applicant's arguments filed on 12-21-2000 have been fully considered but they are not persuasive.

With respect to rejection of claims 1-26 under 35 U.S.C 103(a) as being obvious over Ohtake in view of Shen et al., Applicant argues that "In view of the foregoing, the Examiner has failed to show that one of ordinary would have obviously combined the teachings of Ohtake and Shen et al., to control paging channel power as in the presently claimed invention". Contrary to Applicant's conclusion about the above mentioned references, Ohtake teaches the concept of base station (A, fig. 12A) transmitting a down control channel to the mobile station and mobile station, measuring at the mobile station reception level of a down control channel from the base station and reporting the measured reception level to the base station, and obtaining a comparison result

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by comparing at the base station the reception level of the down control channel with a threshold value which is used to determine the transmission power value of a down talk channel, and determining the initial transmission power value of the down talk channel based on the comparison result. According to this method, the initial transmission power is determined to an optimum value from the start to each mobile station (fig. 12A, col. 4 lines 24-48). Clearly Ohtake teaches the concept of using a first channel to determine optimum transmission power level of the second channel from the base station (A, fig. 12A) to the mobile station (a, fig. 12A), based on the power measurement results at the mobile station of the first channel. It stands to reason to point out that one of ordinary skill in the art could apply Ohtake's concept to optimize paging channel power and power of other channels such as traffic channels, etc, to keep interference levels to the minimum to maintain the optimum operation of the cellular system. Shen et al. teaches the need for power control of all channels that implies paging channel, traffic channels, etc in CDMA environment to minimize interference in the CDMA communication system to maintain optimum capacity of the CDMA system (col. 1 lines 54-63, col. 2 lines 56-67, col. 3 lines 59-61). Ohtake combined with Shen et. al teaches the claim limitations of independent claims 1, 5, 10, 16, 20, and 24, and therefore rejection of these claims is maintained.

With respect to dependent claims 2, 7, 11, 17, 21, 25 and 3, 8, 14, 18, 22, and 26, Applicant argues that "Examiner has failed to make a prima facie case of obvious ness based on Ohtake". As already explained, Ohtake teaches optimizing the second channel based on the power measurements at the mobile station of the first channel (fig. 12A, col. 4 lines 24-48). One

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of ordinary skill in the art could use Ohtake's teaching to apply his concept to control power of other channels including paging channels, traffic channels etc, to keep interference levels to the minimum to maintain the optimum operation of the cellular system. Therefore Examiner has made a prima facie case of obvious rejection and therefore the rejection of these claims is maintained.

Similarly rejection of dependant claims 4, 9, 15, 19, and 23 is maintained as already described in the office action dated 9-21-00.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (703) 305-1461. The examiner can normally be reached on Monday to Friday from 7 AM to 4 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708. The fax phone number for this Group is (703) 305-9508.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-6306, (for formal communications intended for entry)

Or:

(703) 305-9508 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


CURTIS KUNTZ
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